LISTING OF THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in this application. Added text is indicated by underlining, and deleted text is indicated by ~~strikethrough~~. Changes are identified by a vertical bar in the margin.

1. (Original) A method for correcting room acoustics at multiple-listener positions, the method comprising:

measuring a room acoustical response at each listener position in a multiple-listener environment;

warping each of the room acoustical response measured at said each listener position;

determining a general response by computing a weighted average of the warped room acoustical responses;

generating a low order spectral model of the general response;

obtaining a warped acoustic correction filter from the low order spectral model; and

unwarping the warped acoustic correction filter to obtain a room acoustic correction filter; wherein the room acoustic correction filter corrects the room acoustics at the multiple-listener positions.

2. (Currently amended) The method ~~according to~~of claim 1, further ~~including~~ comprising ~~the step of~~ generating a stimulus signal for measuring the room acoustical response at each of the listener positions.

3. (Original) The method according to claim 1, wherein the general response is determined by a pattern recognition method.

4. (Currently amended) The method ~~according to~~of claim [[~~5~~]] 3, wherein the pattern recognition method ~~is at least one of~~comprises a method selected from a group consisting of: a hard c-means clustering method, a fuzzy c-means clustering method, [[~~or~~]] and an adaptive learning method.

5. (Original) The method according to claim 1, wherein the warping is achieved by means of a bilinear conformal map.

6. (Currently amended) The method ~~according to~~of claim 1, wherein the spectral model ~~includes~~ comprises a model selected from a group consisting of ~~a t least one of~~ a Linear Predictive Coding (LPC) model [[~~or~~]] and a pole-zero model.

7. (Original) The method according to claim 1, wherein the warped acoustic correction filter is the inverse of the low order spectral model.

8. (Original) A method for generating substantially distortion-free audio at multiple-listeners in an environment, the method comprising:

measuring acoustical characteristics of the environment at each expected listener position in the multiple-listener environment;

warping each of the acoustical characteristics measured at said each expected listener position;

generating a low order spectral model of each of the warped acoustical characteristics;

obtaining a warped acoustic correction filter from the low order spectral model;

unwarping the warped acoustic correction filter to obtain a room acoustic correction filter;

filtering an audio signal with the room acoustical correction filter; and

transmitting the filtered audio from at least one loudspeaker, wherein the audio

signal received at said each expected listener position is substantially free of distortions.

9. (Currently amended) The method ~~according to~~of claim [[~~12~~]] 8, further ~~including~~ comprising ~~the step of~~ determining a general response by a pattern recognition method.

10. (Currently amended) The method ~~according to~~of claim [[~~13~~]] 9, wherein the pattern recognition method ~~is at least one of~~comprises a method selected from a group consisting of: a hard c-means clustering method, a fuzzy c-means clustering method, [[~~or~~]] and an adaptive leaming method.

11. (Currently amended) The method ~~according to~~of claim [[~~12~~]] 8, wherein the warping is achieved by a bilinear conformal map.

12. (Currently amended) The method ~~according to of~~ claim [[~~12~~]] 8, wherein the spectral model ~~includes~~ comprises a model selected from a group consisting of: ~~at least one of~~ a Linear Predictive Coding (LPC) model [[~~or~~]] and a frequency weighted pole-zero model.

13. (Currently amended) The method ~~according to of~~ claim [[~~12~~]] 8, wherein the warped acoustic correction filter is the inverse of the general response.

14. (Currently Amended) A system for generating substantially distortion-free audio at multiple-listeners in an environment, the system comprising:

a filtering means for performing multiple-listener room acoustic correction, the filtering means formed from:

(i) warped room acoustical responses, wherein the room acoustical responses are measured at each of an expected listener position in a multiple-listener environment;

(ii) a weighted average response of the warped room acoustical responses;

(iii) a low order spectral model of the weighted average response;

(iv) a warped filter formed from the low order spectral model; and

(v) an unwarped room acoustic correction filter obtained by unwarping the warped filter; wherein an audio signal, filtered by the filtering means comprised of the room acoustic correction filter, is received substantially distortion-free at each of the expected listener positions[[.]]; and

a means for transmitting the audio signal.

15. (Currently amended) The system ~~according to~~of claim [[~~18~~]] 14, wherein the weighted average response is determined by a pattern recognition means.

16. (Currently amended) The system ~~according to~~of claim [[~~19~~]] 15, wherein the pattern recognition means comprises a means selected from a group consisting ~~is at least one~~ of a hard c-means clustering system, a fuzzy c-means clustering system, [[~~or~~]] and an adaptive learning system.

17. (Currently amended) The system ~~according to~~of claim [[~~18~~]] 14, wherein the warping is achieved by an all-pass filter chain.

18. (Currently amended) The system ~~according to~~of claim [[~~18~~]] 14, wherein the warped filter includes an inverse of the lower order spectral model.

19. (Currently amended) The system ~~according to~~ of claim [[~~18~~]] 14, wherein the spectral model ~~includes~~ comprises a model selected from a group consisting ~~at least one~~ of a Linear Predictive Coding (LPC) model [[~~or~~]] and a frequency weighted pole-zero model.

20. (Original) A method for correcting room acoustics at multiple-listener positions, the method comprising:

warping each room acoustical response, said each room acoustical response obtained at each expected listener position;

clustering each of the warped room acoustical response into at least one cluster, wherein each cluster includes a centroid;

forming a general response from the at least one centroid;

inverting the general response to obtain an inverse response;

obtaining a lower order spectral model of the inverse response;

unwarping the lower order spectral model of the inverse response to form the room acoustic correction filter; wherein the room acoustic correction filter corrects the room acoustics at the multiple-listener positions.

21. (Currently amended) The method ~~according to~~of claim [[~~24~~]] 21, wherein the warping is achieved by a bilinear conformal map.

22. (Currently amended) The ~~system according to~~method of claim [[~~24~~]] 21, wherein the spectral model ~~includes~~ comprises a frequency weighted pole-zero model.